

Appl. No. 10/089,901

Amdt. dated Oct. 30, 2003

Reply to Office Action of Nov. 15, 2002

### **REMARKS/ARGUMENTS**

In the specification:

The paragraph beginning at page 1, line 3, the paragraph beginning at page 1, line 12, the paragraph beginning at page 3, line 4, the paragraph beginning at page 3, line 23, the paragraph beginning at page 3, line 28 and the paragraph beginning at page 6, line 17 have been amended to correct minor grammatical problems or errors in translation.

The paragraph beginning at page 4, line 23 (SUMMARY) has been amended according to the Claims.

In the claims:

In order to overcome the Examiner's objections Applicant cancels all previous Claims and submits a new set of Claims presenting the Flexible Drinking Straw as a product.

About the matter of novelty, Applicant wishes any possible objections were stated in details.

Applicant understands the point of appointment a Patent Attorney but he has many problems with his Patent Attorneys in various countries (not only overpayments). Anyway, Applicant will appoint a Patent Attorney later on.

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Replacement Sheet

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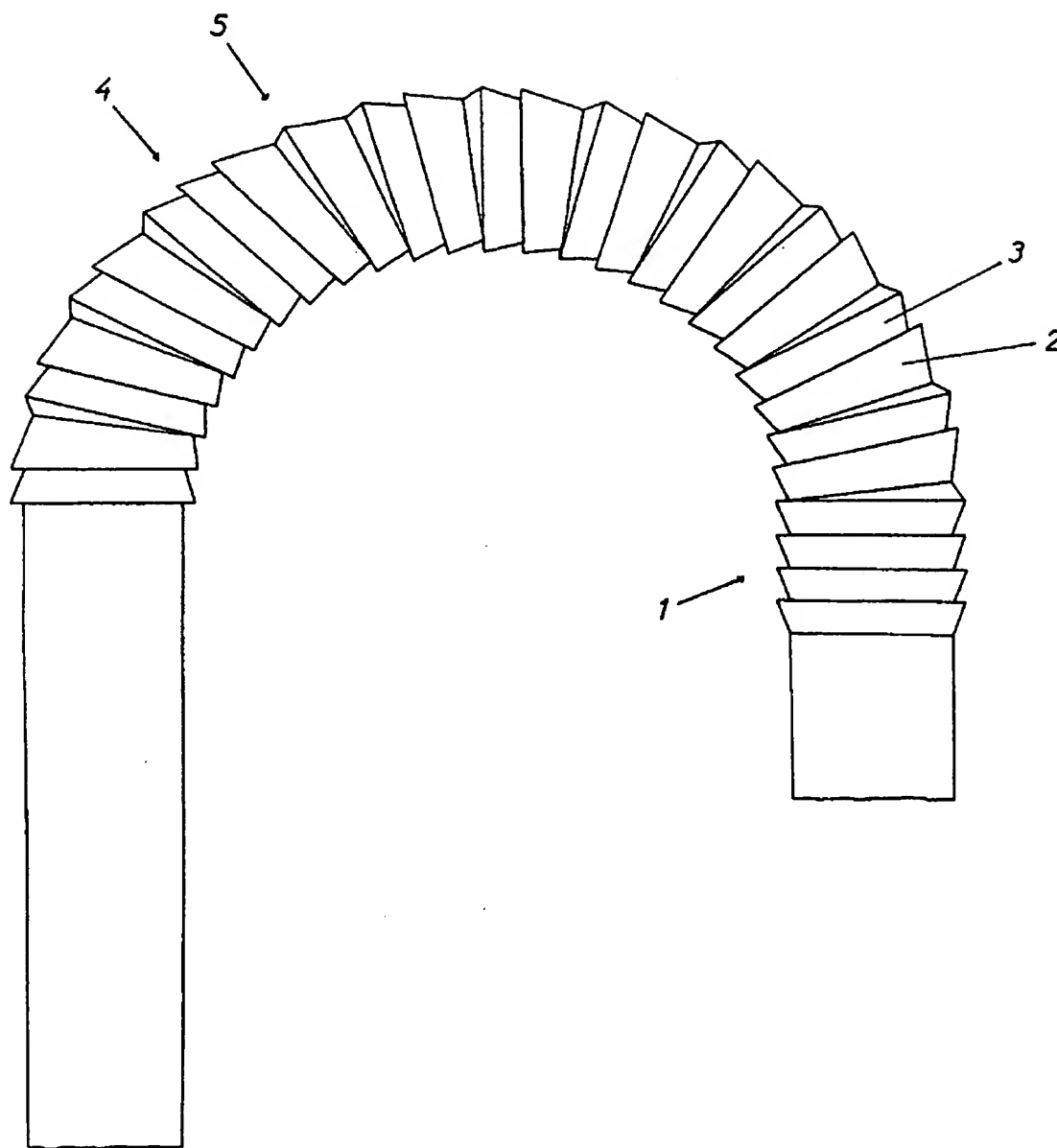


FIG. 1

21.04.2000

PCT/GR 00/00018

Translation from Greek**ORGANISATION OF INDUSTRIAL PROPERTY (OIP)****CERTIFICATE**

We confirm that the documents, which accompany this certificate, are exact and faithful copies of the application for Letters Patent with number 990100138 that was registered with the Organisation of Industrial Property at 22/04/1999 by Mr FOTOPOULOS Anastasios, resident at 49-51, Zakynthou St., 113 62 Athens.


Marousi, 18/04/2000

For the OIP  
The General Director

Stamp  
Signature

Konstantinos Koyias

*True translation from the  
originals kept with me*

  
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## FLEXIBLE DRINKING STRAW

The invention relates to flexible drinking straws, which are attached to the packaging of fruit juices, milks, coffees etc. and are bent to take up less space and to be handier.

5        The straws used to date for this purpose, have 9-10 reentrant overlapping folds. To bend to obtuse angles (e.g. 180°), due to the restricted number of folds, continuous external pressure has to be exercised. This pressure keeps being exercised by the packaging material after they are  
10 packed in their final form. As a result the folds are permanently deformed and straightening of the straw anew is not possible. Also a problem is posed by the fact that all folds are expanded (unfolded) after bending of the straw.

15        The invention retracts these drawbacks and gives the straw the possibility to be straightened anew, almost without any damage.

Figure 1 shows indicatively a flexible drinking straw with  
20 twenty reentrant overlapping folds.

To obtain straightening of the straw requires, first, the flexible drinking straw to have sufficient folds (more than ten), so that when it bends the folds are not deformed in the  
25 least. Second, the flexible drinking straw is not under any form of external pressure. Therefore the straw, after bending, is let free to remain bent at the desired angle without external pressure. Following this the straw can be

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packed in its final form. Third, to achieve the best possible straightening and functionality of the straw, there have to be sufficient folds, so that after bending certain folds remain contracted. We aim at keeping the first folds (1) contracted (e.g. 2-4 first folds), so that after straightening, the straw may bend to all directions thanks to the contracted folds. Further, straightening of the straw is considerably assisted by the existence of interspersed contracted folds among the expanded ones, as well as around the middle of the arch formed by bending of the straw, so that not many consecutive expanded folds exist without interference of one or more contracted ones, particularly at the middle of the arch, where the biggest amount of pressure is exercised (e.g. an expanded fold is followed by a contracted fold).

In order definite folds remain contracted, apart from their number, certain other factors are of importance as well, like the material, point at which pressure is exerted to bend the straw etc. (e.g. when the pressure is applied near or on the first folds, usually they stay contracted).

Finally, with the presence of contracted folds after bending the straw, we can increase its effective length, because when it straightens and all folds are expanded, it can bend, if we wish, at the first folds and the remaining section stays straight and larger than respective section of the usual straws.

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## CLAIMS

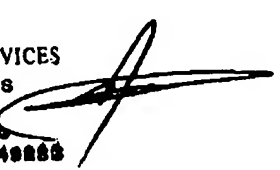
1. The flexible drinking straws, which are attached to packed fruit juices etc., **characterized in that** the number of reentrant overlapping folds is bigger than the maximum number of reentrant overlapping folds borne by the straws of  
5 this type (10 reentrant overlapping folds).

2. The flexible drinking straws, which are attached to packed fruit juices etc., according to claim 1 **characterized in that** the reentrant overlapping folds are sufficient, so that  
10 when the straw bends the folds are not deformed in the least, while after bending, the straw is let free to remain bent at the desired angle without external pressure, whereas, following this, it can be packed in its final form.

15 3. The flexible drinking straws, which are attached to packed fruit juices etc., according to claims 1, 2 **characterized in that**, the reentrant overlapping folds are sufficient, so that after bending certain folds remain contracted, like the first folds (1), also other folds remain  
20 contracted interspersed among the expanded ones, as well as around the middle of the arch formed by bending of the straw.

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**ABSTRACT****FLEXIBLE DRINKING STRAW**

The invention relates to flexible drinking straws that are attached to packed fruit juices, milks, coffees etc. and are bent to take up less space and to be handier, and concerns the changes that render straightening of the straw possible, which was impossible until now, and at the same time they offer the possibility of increasing the effective length of the straw.

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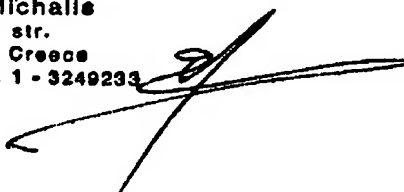
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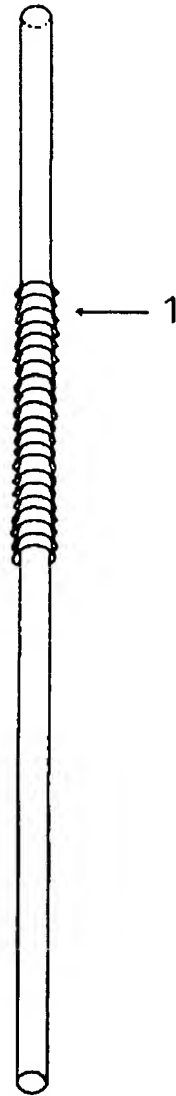


FIG. 1